



Element Materials Technology - Fort Wayne
328 Ley Rd.
Fort Wayne, IN 46825
TEL: (260) 424-1622 FAX: (260) 424-9124
Website: www.element.com

February 22, 2021

Henry Padilla
East Chicago Sanitary District
5201 Indianapolis Blvd
East Chicago, IN 46312
TEL: 219 391 8466
FAX: 219 391 8254

RE: #901

Order No.: 21021294

Dear Henry Padilla:

Element Materials Technology - Fort Wayne received 2 sample(s) on 2/12/2021 for the analyses presented in the following report.

In accordance with your instructions, Element Materials Technology Indiana conducted the analysis shown on the following pages on samples submitted by your company. The results relate only to the items tested. Unless otherwise noted, all analysis was conducted using approved methodologies from EPA, SM, or other client-specified methods. All relevant sampling information is on the attached chain-of-custody form. The initials SUB as the analyst designate any testing sub-contracted by Element Materials Technology Indiana.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read 'Samantha K. Packard'.

Samantha K. Packard
Project Manager
328 Ley Rd.
Fort Wayne, IN 46825



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Case Narrative

WO#: 21021294

Date: 2/22/2021

CLIENT: East Chicago Sanitary District

Project: #901

The Cyanide 1677 testing was subcontracted to Eurofins Test America Pittsburgh. Their report is attached in its entirety.

The surrogate recovery was outside of acceptance limits for the EPA 625 analysis on sample 21021294-001C due to suspected matrix interference. This data is reported based upon the acceptable recoveries in additional associated QC.

Original



Element Materials Technology - Fort Wayne
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Analytical Report

(continuous)

WO#: 21021294

Date Reported 2/22/2021

CLIENT: East Chicago Sanitary District

Lab Order: 21021294

Project: #901

Lab ID: 21021294-001

Collection Date: 2/11/2021 8:31:00 AM

Client Sample ID: #901

Matrix: WASTEWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
OIL AND GREASE, TOTAL				E1664	Analyst: JGB	
Oil & Grease, Total	< 5.0	5.0		mg/L	1	2/15/2021 4:51:25 PM
OIL AND GREASE, PETROLEUM HYDROCARBONS				E1664	Analyst: JGB	
Oil & Grease, Petroleum	< 5.0	5.0		mg/L	1	2/15/2021 4:51:25 PM
SV COMPOUNDS FOR CATEGORICAL RQTS				E625	Analyst: SDF	
Bis(2-ethylhexyl)phthalate	< 0.050	0.050		mg/L	5	2/22/2021 11:50:00 AM
Carbazole	< 0.050	0.050		mg/L	5	2/22/2021 11:50:00 AM
Fluoranthene	< 0.050	0.050		mg/L	5	2/22/2021 11:50:00 AM
n-Decane	< 0.050	0.050		mg/L	5	2/22/2021 11:50:00 AM
n-Octadecane	< 0.050	0.050		mg/L	5	2/22/2021 11:50:00 AM
SEMI-VOLATILES IN WW				E625	Analyst: SDF	
Phenanthrene	< 0.050	0.050		mg/L	5	2/22/2021 11:50:00 AM

Qualifiers: H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitation Limit
S Spike Recovery outside accepted recovery limits

M Manual Integration used to determine area response
PL Permit Limit
RL Reporting Detection Limit



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Analytical Report

(continuous)

WO#: 21021294

Date Reported 2/22/2021

CLIENT: East Chicago Sanitary District

Lab Order: 21021294

Project: #901

Lab ID: 21021294-002

Collection Date: 2/11/2021 8:31:00 AM

Client Sample ID: #901

Matrix: WASTEWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FLUORIDE		E300.0			Analyst: HNN	
Fluoride	1.7	0.5		mg/L	5	2/17/2021 9:15:07 PM
CHEMICAL OXYGEN DEMAND		M5220 D			Analyst: SMB	
Chemical Oxygen Demand	433	10.0		mg/L	1	2/17/2021 5:52:00 PM
AMMONIA AS N		E350.1			Analyst: AJC	
Nitrogen, Ammonia (As N)	46.4	1.00		mg/L	10	2/15/2021 2:06:57 PM
PHENOLICS IN WASTEWATER		E420.1			Analyst: ANS	
Phenolics, Total Recoverable	0.084	0.050		mg/L	2	2/17/2021 5:00:00 PM
TOTAL PHOSPHORUS		M4500-P F			Analyst: CDS	
Total Phosphorus	< 0.050	0.050		mg/L	1	2/17/2021 3:44:30 PM
TOTAL SUSPENDED SOLIDS		M2540 D			Analyst: MNK	
Suspended Solids (Residue, Non-Filterable)	< 2	2		mg/L	1	2/17/2021 2:34:00 PM
MERCURY		E245.1			Analyst: FJR	
Mercury	< 0.00020	0.00020		mg/L	1	2/18/2021 11:54:21 AM
METALS IN WATER BY ICP-MS, TOTALS		E200.8			Analyst: FJR	
Arsenic	0.00943	0.00020		mg/L	1	2/17/2021
Chromium	0.00123	0.00040		mg/L	1	2/17/2021
Cobalt	0.00530	0.00010		mg/L	1	2/17/2021
Copper	0.00214	0.00020		mg/L	1	2/17/2021
Lead	< 0.00020	0.00020		mg/L	1	2/17/2021

Qualifiers:
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitation Limit
S Spike Recovery outside accepted recovery limits

M Manual Integration used to determine area response
PL Permit Limit
RL Reporting Detection Limit



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Analytical Report

(continuous)

WO#: 21021294

Date Reported 2/22/2021

CLIENT: East Chicago Sanitary District

Lab Order: 21021294

Project: #901

METALS IN WATER BY ICP-MS, TOTALS

E200.8

Analyst: FJR

Molybdenum	0.0238	0.00020	mg/L	1	2/17/2021
Nickel	0.0161	0.00100	mg/L	1	2/17/2021
Tin	< 0.00500	0.00500	mg/L	1	2/17/2021
Zinc	0.0650	0.00040	mg/L	1	2/17/2021

Qualifiers:

H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitation Limit
S Spike Recovery outside accepted recovery limits

M Manual Integration used to determine area response
PL Permit Limit
RL Reporting Detection Limit

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-117254-1
Client Project/Site: Cyanide 21021294

For:
Element Materials Technology
328 Ley Rd
Suite100
Fort Wayne, Indiana 46825

Attn: Katie Hernandez



Authorized for release by:
2/19/2021 7:56:15 AM

Andy Johnson, Manager of Project Management
(615)301-5045
Andy.Johnson@Eurofinset.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Job ID: 180-117254-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-117254-1

Comments

No additional comments.

Receipt

The sample was received on 2/17/2021 10:00 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.2° C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

General Chemistry

Method OIA-1677: The following sample was diluted to bring the concentration of target analyte within the calibration range: 21021294-001A (180-117254-1). An elevated reporting limit (RL) is provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	02-21-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-22
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20 *
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-22
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	01-31-22
Wisconsin	State	998027800	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-117254-1	21021294-001A	Water	02/11/21 08:31	02/17/21 10:00	

Method Summary

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Method	Method Description	Protocol	Laboratory
OIA - 1677	Available Cyanide by Flow Injection, Lig	EPA	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Client Sample ID: 21021294-001A
Date Collected: 02/11/21 08:31
Date Received: 02/17/21 10:00

Lab Sample ID: 180-117254-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA - 1677		5			346967	02/18/21 10:50	CAK	TAL PIT
Instrument ID: ALPKEM3										

Laboratory References:
TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:
Lab: TAL PIT
Batch Type: Analysis
CAK = Chuck Kieda

Client Sample Results

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Client Sample ID: 21021294-001A

Lab Sample ID: 180-117254-1

Date Collected: 02/11/21 08:31

Matrix: Water

Date Received: 02/17/21 10:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	0.10		0.010	0.0075	mg/L			02/18/21 10:50	5

QC Sample Results

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

Method: OIA - 1677 - Available Cyanide by Flow Injection, Lig

Lab Sample ID: MB 180-346967/23

Matrix: Water

Analysis Batch: 346967

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	ND		0.0020	0.0015	mg/L			02/18/21 10:26	1

Lab Sample ID: LCS 180-346967/22

Matrix: Water

Analysis Batch: 346967

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Available	0.0501	0.0502		mg/L		100	82 - 132

QC Association Summary

Client: Element Materials Technology
Project/Site: Cyanide 21021294

Job ID: 180-117254-1

General Chemistry

Analysis Batch: 346967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-117254-1	21021294-001A	Total/NA	Water	OIA - 1677	
MB 180-346967/23	Method Blank	Total/NA	Water	OIA - 1677	
LCS 180-346967/22	Lab Control Sample	Total/NA	Water	OIA - 1677	

ADDRESS
Element Materials Technology - Fort Wayne
328 Ley Rd.
Fort Wayne, IN 46825
TEL: (260) 424-1622
FAX: (260) 424-9124
Website: www.element.com

SU	AD	CTI	PH	AC
<p>Eurofins/Test America 301 Alpha Drive RIDC Park Pittsburgh PA 15238</p>				
ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX
1	21021294-001A CYAN_1677	S-901 Grab	500HDPENAOH	Wastewater
DATE COLLECTED		DATE COLLECTED		
2/11/2021 8:31:00 AM		1		
<p>SPECIAL INSTRUCTIONS / COMMENTS: Due: 2.19.21 PD# EFW042903</p>				
<p>COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description</p>				

RUSH!



Relinquished By: <i>[Signature]</i>	Received By: <i>[Signature]</i>	Date: 2/11/21	Time: 1345
Relinquished By: <i>[Signature]</i>	Received By: <i>[Signature]</i>	Date: 2/11/21	Time: 1345
Relinquished By: <i>[Signature]</i>	Received By: <i>[Signature]</i>	Date: 2/11/21	Time: 1345
TAT: Standard <input type="checkbox"/>	RUSH <input type="checkbox"/>	Next BD <input type="checkbox"/>	2nd BD <input type="checkbox"/>
<p>Note: RUSH requests will incur surcharges!</p>			
<p>Temp of samples _____ °C Attempt to Cool? _____</p>			
<p>Comments: _____</p>			

Login Sample Receipt Checklist

Client: Element Materials Technology

Job Number: 180-117254-1

Login Number: 117254

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Chain of Custody **OK/MS/**

W291

Laboratory Number:

21021294

Company Name:
Contact Name:
Address:

Client Information:
East Chicago Sanitary District
Henry Padilla
5201 Indianapolis Blvd

Billing Information:
Same

PO Number:

Quote Number:

Project Name/Number:
S-901

Page 1 of 1
Matrix Code

Page 20 of 20

City, State Zip:

East Chicago IN 46312

Phone Number:

219-391-8466

Ext. 240

Ext:

Bill Monthly

Shipping Method:

Fax Number:

E-mail Address:

hpadilla@eastchicago.com

Which Regulations Apply:

☐ RCRA ☐ Drinking Water
☐ POTW ☐ Distribution
☐ NPDES ☐ Special
☐ USDA/FDA ☐ State
☐ RECAP/RISC ☐ Other

Turn Time 5 TAT
(Rush turn times will incur a surcharge and must be pre-approved by lab.)

Sample ID/Description

Collection Information
Date Time Grab/Composite Matrix

Quantity

Type
P=Plastic, G=Glass, V=Vial

Pres.

Requested Tests

Comments

Sample ID/Description	Date	Time	Grab/Composite	Matrix	Quantity	Type	Pres.	CYANIDE 1677	Oil & Grease T&SI	**SVOC list	*Metals	NH3, T.PHOS, COD	PHENOL	300: Fluoride	TSS	Comments
S-901 Grab	2-11-21	8:31		WW	1	P	NAOH	X								*As, Cr, Cu, Pb, Mo, Ni, Zn, & Hg, Extra: Co, Sn
S-901 Grab				WW	1	G	H2SO4		X							**Carbazole, n-Decane, Fluoranthene, n-Octadecane, Phenanthrene, Bis(2EH) Phthalate
S-901 Grab				WW	1	G	NONE			X						
S-901 Composite				WW	1	P	HNO3				X					
S-901 Composite				WW	1	P	H2SO4					X				
S-901 Composite				WW	1	G	H2SO4						X			
S-901 Composite				WW	2	P	NONE							X	X	

Relinquished by

Date/Time

Received by

Date/Time

Composite Sampler:
Start Date/Time: 2-11-21 8:31
End Date/Time: 2-12-21 8:22

1	W. Blake	2-12-21 10:35	Corbin Blake	2-12-21 10:35	Received at lab on ice?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 4°C
2	Corbin Blake	2-12-21 15:00	Corbin Blake	2-12-21 15:00		
3						

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

8800 North US 31
Columbus, IN 47201 USA
P 812-375-0531
F 812-375-0731

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Fort Wayne, IN 46825 USA
P 260-471-7000
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Warsaw, IN 46580 USA
P 574-267-3305
F 574-269-6569

3371 Cleveland Road, Suite 100A
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P 574-277-0707

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Lafayette, LA 70508-3344 USA
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